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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/553,392

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Mariano Pecorari

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MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC

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SUITE 200

VIENNA, VA 22182-3817

EXAMINER

HUTCHINS, CATHLEEN R

ART UNIT

PAPER NUMBER

3672

MAIL DATE

DELIVERY MODE

12/22/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/553,392	Applicant(s) PECORARI ET AL.	
	Examiner CATHLEEN R. HUTCHINS	Art Unit 3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 29-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16 and 19-28 is/are rejected.
- 7) ☒ Claim(s) 15, 17 and 18 is/are objected to.
- 8) ☒ Claim(s) 1-37 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the axial retainer ring as claimed in claim 8 and the retainer ring as claimed in claim 1- for which claim 8 introduces axial retainer ring in addition to the retainer ring- must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 1 is objected to because of the following informalities: there is no antecedent basis for "the pressure" in line 3; "the body of the stuffing box" in line 8; and "the large outside diameter" in line 9. Appropriate correction is required.

Claim 8 is objected to because of the following informalities: there is no antecedent basis for "said unitary piece" in line 2. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 7-13, 24-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Hult, PG Pub 2001/0050168.

Hult teaches a pump drive head 18 with an integrated stuffing box 5 comprising: a power transmission 76 coupled to a rotating pump drive shaft 26; a stuffing box 5; a thrust assembly 90 to take tensile force; wherein power transmission 76 comprises a tube 92 and 110 to be rotated coaxially with the shaft 26 having two different diameters- where diameter of 110 is larger than diameter of 92 portion-, which is connected at its bottom end to a sleeve 80 for rotation, wherein rotary seals 116 fit over the smaller diameter of the tube to establish fluid seals between the tube and stuffing box, the outside diameter of the seals smaller than the larger outside diameter of the tube, and wherein the

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tube-to shaft fit has static seals 126, in which the seals are adapted, by virtue of a retainer ring that is the top seal 126, to come away with the tube; a rotary gasket 120 provided on the bottom end of the tube, with outside diameter a labyrinth pattern paragraph [0045]: 9; packing 116 is mounted on rotating sleeve around the small diameter, held by at least one axial retainer ring that is the lowest ring of 116; with at least one detent ring 239 and a pre-loaded spring 118 between packing 116 and retainer ring and thrust assembly 90; static seals 126 placed in the joint region between the tube and sleeve and compressed to make a tight seal within a skirt of a top cover 122; the tube is connected to the thrust assembly by a rotating hub 76 held in place by a tighten-down means 84 that is guided by roller thrust bearing 90 and bell 56 enclosing the hub and bearing. Hult also teaches a clamp 160 with self-centering jaws 170 within the stuffing box, to grip the shaft 26 in a wedge contact with a tighten-down screw 176, the wedge contact is achieved by a conical taper surface 172; radial gripping movement of the jaws are guided by a prismatic fit of the clamp housing 162; elastic means 174 mounted between the jaws to open them when clamping action is released; the shaft gripping surfaces are semicircular along 172 about a center that is offset from the shaft centerline towards the opposite jaw, shown in Fig 18, where only one jaw is engaged, and the second jaw 182 is offset from the centerline of shaft 26.

Claims 1, 2, 4-6, and 10-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Ricalton, et al. US5791411.

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Ricalton, et al. teaches a pump drive head with an integrated stuffing box 1 comprising: a power transmission that rotates the rod 39, as described in the Abstract, coupled to a rotating pump drive shaft 39; a stuffing box 1; a thrust assembly 13 to take tensile force; wherein power transmission comprises a tube 11 to be rotated coaxially with the shaft having two different diameters with the larger diameter at top at 11b and the smaller diameter below along reference number 8, which is connected at its bottom end to a sleeve 6 for rotation, wherein rotary seals 42 fit over the smaller diameter of the tube to establish fluid seals between the tube and stuffing box, the outside diameter of the seals smaller than the larger outside diameter of the tube, and wherein the tube-to shaft fit has static seals 8, in which the seals are adapted, by virtue of a retainer ring 27, to come away with the tube; a gasket 26 connected to the retainer ring of the seals on the sleeve; an outside-communicated tapping hole see Fig A below downstream of the gasket and the seals; rotary seals include packing seals 32, oil seals 29 downstream of the rotary seals and inlet hole, with packing mounted between the tube and inner seat of the stuffing box; static seals are in the joint region between tube 11 and sleeve 6 and compressed to make a seal in the skirt of the top cover that is along 2; the tube is connected to the thrust assembly for rotation by rotating hub 20 held in place by tighten-down means 11a in the upper portion of the drive housing with a roller thrust bearing and bell 5 to enclose the hub and bearings.

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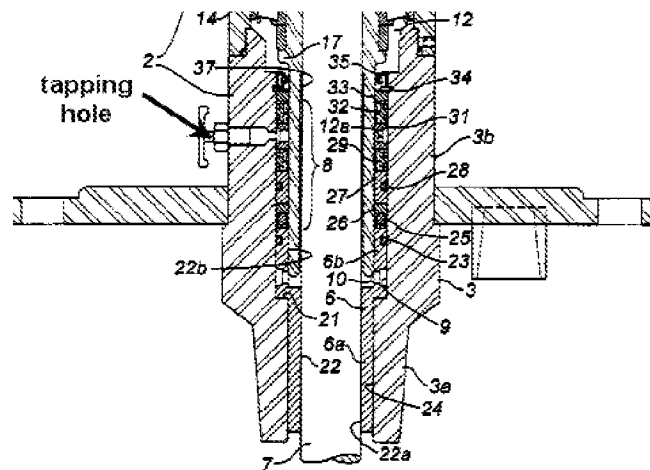


Fig A: taken from Ricalton, et al. Fig 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hult.

Hult teaches all of the elements of claims 1 and 11, and a rotary connection between drive gear 76 and tube 94, but is silent as to what

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mechanism is used to connect the drive gear and tube for rotation, thus does not teach the hub with an inside diameter with an axial slot for pulling out a connection tongue between the tube and drive. Examiner takes Official Notice that tongue connections as a means to connect a shaft with a rotation source are well known in the art, and that it would have been obvious to a person having ordinary skill in the art at the time of the instant invention to modify Hult such that a connection tongue/ Key is used to connect the shaft with the rotation source, with the housing having a slot such that the tongue/ key can be inserted or removed.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hult in view of Ricalton, et al.

Hult teaches all of the elements of claims 1 and 8, but does not teach a ring spacer in the stuffing box with a liquid lubricant inlet hole. Ricalton, et al. teaches a ring spacer 31 within a stuffing box 1 that has a liquid lubricant inlet hole 12a. It would have been obvious to a person having ordinary skill in the art at the time of the instant invention to modify Hult in view of Ricalton, et al. to use the ring spacer with a bore in it in the oil seal stack, such that lubricant oil can be injected into the seal stack.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hult.

Hult teaches all of the elements of previous claims and a gasket 120 with a labyrinth pattern Paragraph [0045]: 9 at the bottom end of the sleeve, but is silent as to whether the labyrinth pattern is on the inside or outside diameter of

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the gasket, and thus does not teach the gasket with a labyrinth pattern on its inside diameter, or the gasket keyed to the bottom end of the sleeve. The examiner takes Official Notice that it is well known in the art to switch the sides of the location of a feature on a part, and that it is well known in the art to use a key to connect two rotating parts, and it would have been obvious to a person having ordinary skill in the art at the time of the instant invention to modify Hult such that the labyrinth pattern is on the inner diameter, to trap contaminants along the surface of the tube/ sleeve, and to use a keyed connection between the sleeve and the gasket, so that the sleeve and gasket will rotate together.

Claims 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hult in view of Purtle, US1630863.

Hult teaches all of the elements of previous claims, and a shaft locking clamp 160 with a stem 176 that is cylindrical and fits through a seal, as shown in Fig 14 with dark regions along step 176, on the cover 162, with guide and elastic bias member 174 between one jaw 170 and the cover on the opposite side of 170. Hult does not teach the shaft locking clamp with a pair of jaws, one that pushes and one that pulls, operated through a screw that acts on the push jaw and is engaged in a threaded hole of the pull jaw. It would have been obvious to a person having ordinary skill in the art at the time of the instant invention to modify Hult in view of Purtle to use an art recognized equivalent means of clamping a tubular, as described by Purtle, such that only one side of the clamp needs to be tightened down to provide clamping force on the tubular.

Allowable Subject Matter

Claims 15, 17, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed 9/23/2008 have been fully considered but they are not persuasive. Applicant's arguments that the seal of Hult is not a retaining ring are refuted. The retaining ring of the claims does not positively recite any retaining features, thus the seals 126, which are ring-shaped and retain the seals shown above the lowest seal, function as a retaining ring. A similar argument may be made regarding applicant's arguments that Ricalton does not teach a retaining ring. The spacer taught by Ricalton is ring shaped, and retains the seals above the ring, as well as the seal 28 against the housing. Applicant's arguments that Hult does not teach the seals to come away with the tube are refuted. The claims use the term "adapted" to come away with the tube, for which the seals are clearly capable of being removed with the tube, since the seals are not fixed to the stuffing box housing. A similar argument may be made that Ricalton does teach the seals capable of coming away with the tube when disassembled, since the seals are not fixed to the stuffing box housing. Applicant's statement that the Ricalton, Hult, Dollison, and Purtle references are not related, while true, are irrelevant to the 35 USC 103(a) rejections. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a

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reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation is found in the knowledge generally available to one of ordinary skill in the art, particularly since the elements taught by Ricalton are equivalent means of injecting lubricant to the seals.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CATHLEEN R. HUTCHINS whose telephone number is (571)270-3651. The examiner can normally be reached on Mon thru Thurs 7:30-5, alternate Fri 7:30-4 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CRH/
12/17/2008

/Kenneth Thompson/
Primary Examiner, Art Unit 3672